

# **PIH43** **USE OF QUALITY-ADJUSTED LIFE-YEARS FOR THE ESTIMATION OF EFFECTIVENESS OF SCREENING PROGRAMMES: A SYSTEMATIC REVIEW**

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**OBJECTIVES:** To identify and characterise studies that have used quality-adjusted life-years (QALYs) based on actual measurements of patients' health-related quality of life (HRQoL) as an indicator of effectiveness of screening programmes. **METHODS:** Systematic search of the literature until March 2010, using several electronic databases. Initial screening of articles was based on abstracts, and evaluation of full-text articles was done independently by at least two of the authors. The final inclusion decision was based on consensus. **RESULTS:** The search identified 1610 articles. The use of QALYs in evaluation of screening programmes has expanded in recent years as 617 of the articles had been published between 2007 and 2010, while the corresponding figure between 1966 and 2010 was 993. Based on review of abstracts, 431 full-text articles were obtained for closer inspection. Of the reviewed full-text articles, 78 reported QALYs based on patient-derived data using a valid HRQoL assessment. The most frequently used method was Time Trade-Off (55%) followed by Standard Gamble (21%) and EQ-5D (26%). The most frequently studied medical conditions were malignant diseases (22%) followed by cardiovascular diseases (19%). The majority of the studies came from the USA (46%) or the UK (27%). All studies employed some kind of modelling with the Markov model being the most prevalent type (62%). Most articles (71%) concluded that the screening programme studied was cost-effective. Most of the studies included in the review were of high quality, but there were still a lot of variation as to which outcome measures were chosen, and only few studies reported incremental analysis. **CONCLUSIONS:** The use of QALYs in the evaluation of cost-effectiveness of screening programmes has expanded during the last few years. However, only a minority of studies have employed actual patient-derived HRQoL data.

# **PIH44** **THE INFLUENCE OF INDIVIDUAL FACTORS ON PELVIC PAIN AND QUALITY OF LIFE IN ENDOMETRIOSIS**

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**OBJECTIVES:** The aim of the study was to assess potential individual factors influencing the efficacy of combined surgical and medical therapy, as well as quality of life and pain scores in endometriosis patients with pelvic pain. **METHODS:** In a prospective study we used a specifically designed questionnaire among patients suffering from persistent pelvic pain and undergoing laparoscopy followed by GnRH analogue therapy. The questionnaire gathered information on the following groups of variables: age, marital status, education, reproductive and medical history including previous pregnancies and parity, knowledge of accompanying pelvic disorders, regular sport activity, concurrent cigarette smoking, as well as general quality of life estimates including self-image. Pelvic pain was scored using a visual analogue scale. **RESULTS:** Eighty-one patients were eligible and willing to participate by filling out the questionnaires before surgery and upon completing medical therapy. After cessation of therapy, 53.0% of patients reported absence of pain. Among these, 11.6% were smokers, corresponding to 35.7% of all smokers in the study. However, 56.7% of non-smoker participants reported a positive outcome that proved to be significantly larger than the ratio of pain-free smoker participants ( $p = 0.02$ ). Improvement in quality of life was reported by 73.7% of all patients, and only 9.4% of them were smokers. Fourteen patients among regular exercisers and 33 patients among those without physical activity reported the effectiveness of painkillers for pelvic pain, corresponding to 45.1% and 66% of these subgroups, respectively ( $P < 0.05$ ). **CONCLUSIONS:** Based on our results, we can conclude, that regular smoking might have a disadvantageous impact on the success rate of combined surgical and medical therapy for endometriosis related pelvic pain. Also, it appears that painkillers might be less effective among endometriosis patients performing regular daily sport activities, and, thus it might impose them to an unnecessary burden of possible side effects.

# **PIH45** **HEALTH-RELATED QUALITY OF LIFE (HRQOL) OF FERTILE WOMEN USERS OF CONTRACEPTIVE METHODS**

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**OBJECTIVES:** Women's choices of contraceptive method are largely affected by the safety and efficacy of contraceptive methods as well as by change in women's quality of life. The SEC-QoL questionnaire has been recently elaborated and validated in fertile women users of contraceptive methods in Spanish population. **METHODS:** Observational, prospective, multicenter study involving 41 contraceptive gynaecolo-

gist and GPs. Three patients' groups were identified at baseline visit: 1) Fertile women users of efficacy contraceptive methods; 2) Fertile women users of non-efficacy contraceptive methods but will begin to use efficacy contraceptive methods; 3) Fertile women user of non efficacy contraceptive methods. All women were  $\geq 18$  years. Follow up and final visit was at 4 month since baseline visit. Socio-demographic and clinical information was gathered. The specific questionnaire SEC-QoL (19 items) was administered. **RESULTS:** A total of 453 women were included. Mean (SD) age was 29.3 (7.7). The most frequently used contraceptive methods were: pill (43% A), inconsistent condom (79% B and 63% C). The factorial analysis confirmed a total of 5 dimensions (social/daily activities, menstrual and breast symptoms, psychological and sexual dimension). HRQoL according to SEC-QoL score was higher (better HRQoL) in group a (59.2) than in group B (46.6) and C (49.8) ( $P < 0.01$ ). Considering a and B groups, HRQoL (SEC-QoL total score) was better in women with low bleeding intensity, low pain, and low androgenic and breast symptoms ( $P < 0.01$ ). No differences were shown according to days between menstrual intervals. Hormonal contraceptive method users showed better HRQoL (61.2) than women using other method (53.3) ( $P < 0.05$ ). Both, in group a and B an increase in HRQoL was shown in the final visit, being statistically significant in all dimensions of SEC-QoL questionnaire in Group B ( $P < 0.05$ ). **CONCLUSIONS:** SEC-QoL is a valid and reliable specific measure to assess HRQOL in fertile women users of contraceptive methods, in routine clinical practice and clinical studies.

# **PIH46** **A SUBJECTIVE APPROACH TO FACTORS INFLUENCING RECOVERY AMONG MEN WHO ARE ACTIVE IN THE LABOR MARKET**

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**OBJECTIVES:** The survey was meant to find out how much importance males attribute to various factors including patients' compliance, faith and financial resources, physicians' expertise and personality, nurses' attitudes, relatives' and God's help and the appropriate medication. Another major aim was to reveal any possible differences between males' and females' attitudes to the factors listed and any gender specific differences in the evaluation of individual factors and their relationship with background variables such as health as a value, past major disease or operation, subjective health status, age, education. **METHODS:** In the non-randomised research quantitative approach was used to investigate males' personal opinions concerning recovery. The cross-sectional examination included a survey administered in three workplaces. The target population included employees 18–65 years of age. There were 188 questionnaires distributed of which  $n = 147$  were assessable, which included  $n = 73$  completed by males. **RESULTS:** There was a significant difference concerning the importance attributed to relatives' ( $p = 0.000$ ), faith ( $p = 0.005$ ) and God's help ( $p = 0.005$ ). Males considered the role of these factors as less important. Those judging their own health status very bad or quite bad thought that financial resources would have a great impact on recovery. This opinion was significantly characteristic among males with lower levels of education. Physicians' personality was regarded as less important by males than by females. **CONCLUSIONS:** There was no significant difference detected between the two genders with regard to the priority order of the examined factors including patients' compliance, physicians' expertise and patients' financial resources. Age proved to have a strong influence on evaluating the different factors.

## **INDIVIDUAL'S HEALTH – Health Care Use & Policy Studies**

# **PIH47** **LONG-TERM EFFECTS OF CHILDREN PNEUMOCOCCUS VACCINATION: AN AGENT BASED APPROACH**

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**OBJECTIVES:** Dynamical modeling and simulation of the epidemiological influence of infant immunization with PCV7 against pneumococci induced serious disease and time depending behavior of carrying rates of the pathogens in nasopharynx using an agent based approach. **METHODS:** The implemented strategy is a multi agent based model approach with detailed implementation of individual social contacts and direct person to person transmission of the pneumococcal bacteria. To test the influence of different vaccination strategies and the induced non linear effects like herd immunity effects and serotype replacement, strongly influencing the over all effectiveness, additional assumptions are made. Instead of 90 known pneumococcal pathogens only 2 relevant classes are modeled: the serotypes included in the vaccine and others. The dynamic model is simulated over a long period (25 years) to find out long term effects for stability tests. Additionally population dynamics are integrated because of their influence on long time behavior. Induced change in the demographic shape of the population combined with knowledge of different carrier rates depending on the persons age lead to extra effects on immunization. **RESULTS:** For standard immunization program implementation as advocated by EPAR/EMA the direct influence of the immunization including herd immunity and serotype replacement is measured. For basic simulation runs with realistic parameters for Austria a decrease of 30% of serious diseases is measured. Results for serotype replacement (40–60%) are calculated. In contradiction to other modeling methods this values are dynamically generated by the simulation and no input parameters. **CONCLUSIONS:** Agent based modeling leads to detailed